Usability Testing 101

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Summary: UX researchers use this popular observational methodology to uncover problems and opportunities in designs.

Usability testing is a popular UX research methodology.

> Definition: In a **usability-testing** session, a researcher (called a "facilitator" or a "moderator") asks a participant to perform tasks, usually using one or more specific user interfaces. While the participant completes each task, the researcher observes the participant's behavior and listens for feedback.

The phrase "usability testing" is often used interchangeably with "user testing."

TOP

Why Usability Test?

The goals of usability testing vary by study, but they usually include:

- **Identifying problems** in the design of the product or service

- **Uncovering opportunities** to improve

- **Learning about the target user's** behavior and preferences

Uncover Problems
in the design

Discover Opportunities
to improve the design

Learn About Users
behavior and preferences

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*Usability testing helps us to uncover problems, discover opportunities, and learn about users.*

Why do we need to do usability testing? Won't a good professional UX designer know how to design a great user interface? Even the best UX designers can't design a perfect — or even good enough — user experience without **iterative design** driven by **observations of real users** and of their interactions with the design.

There are many variables in designing a modern user interface and there are even more variables in the human brain. The total number of combinations is huge. **The only way to get UX design right is to test it.**

Elements of Usability Testing

There are many different types of usability testing, but the core elements in most usability tests are **the facilitator, the tasks, and the participant**.
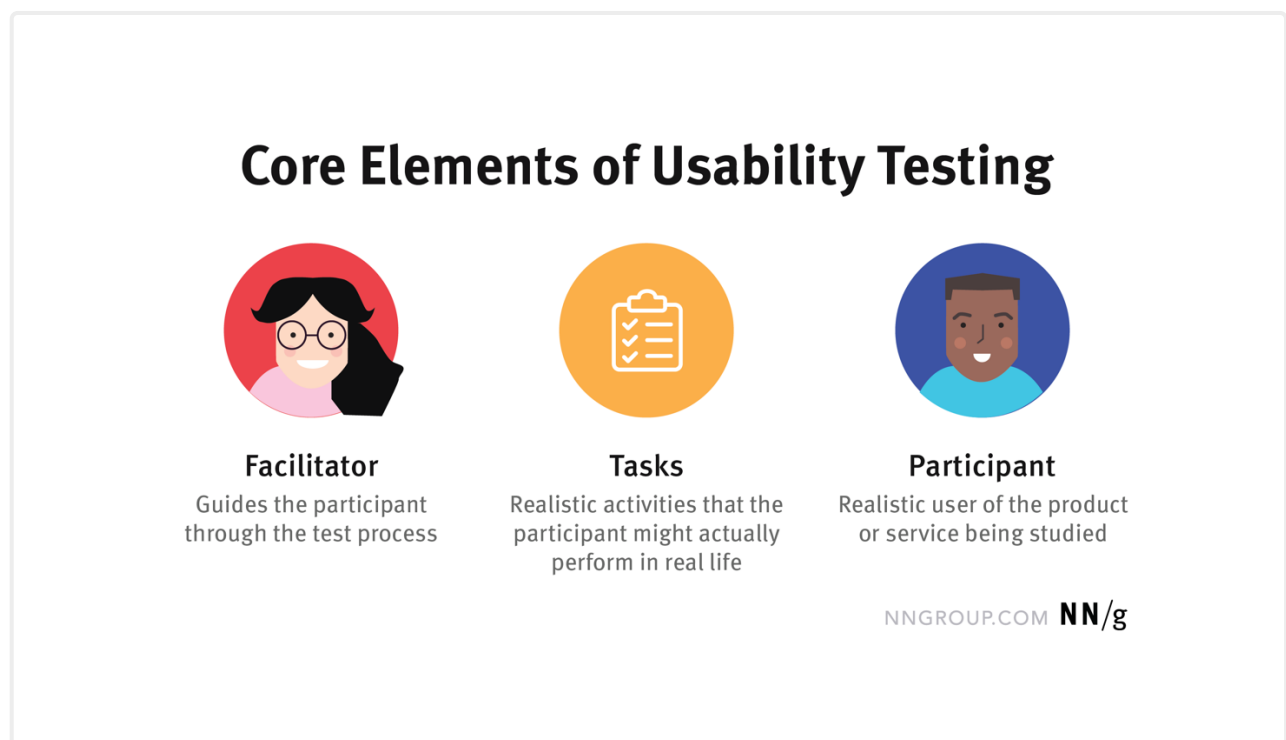
A usability-testing session involves a participant and a facilitator who gives tasks to the participant and observes the participant's behavior.

The facilitator administers tasks to the participant. As the participant performs these tasks, the facilitator observes the participant's behavior and listens for feedback. The facilitator may also ask followup questions to elicit detail from the participant.

Usability Testing: Flow of Information

Observes

Interviews

Gives feedback

Facilitator

Participant

Administers

Performs

Tasks

In a usability test, the facilitator gives instructions and task scenarios to the participant. The participant provides behavioral and verbal feedback about the interface while he performs those tasks.

Facilitator

The **facilitator** guides the participant through the test process. She gives instructions, answers the participant's questions, and asks followup questions.

The facilitator works to ensure that the test results in high-quality, valid data, without accidentally influencing the participant's behavior. Achieving this balance is difficult and requires training.

(In one form of remote usability testing, called remote unmoderated testing, an application may perform some of the facilitator's roles.)

Tasks

The **tasks** in a usability test are realistic activities that the participant might perform in real life. They can be very specific or very open-ended, depending on the research questions and the type of usability testing.

Examples of tasks from real usability studies:

> *Your printer is showing "Error 5200". How can you get rid of the error message?*

> *You're considering opening a new credit card with Wells Fargo. Please visit wellsfargo.com and decide which credit card you might want to open, if any.*

> *You've been told you need to speak to Tyler Smith from the Project Management department. Use the intranet to find out where they are located. Tell the researcher your answer.*

Task wording is very important in usability testing. Small errors in the phrasing of a task can cause the participant to misunderstand what they're asked to do or can influence how participants perform the task (a psychological phenomenon called priming).

Task instructions can be delivered to the participant verbally (the facilitator might read them) or can be handed to a participant written on task sheets. We often ask participants to read the task instructions out loud. This helps ensure that the participant reads the instructions completely, and helps the researchers with their notetaking, because they always know which task the user is performing.

Participant

The **participant** should be a realistic user of the product or service being studied. That might mean that the user is already using the product or service in real life. Alternatively, in some cases, the participant might just have a similar background to the target user group, or might have the same needs, even if he isn't already a user of the product.

Participants are often asked to **think out loud** during usability testing (called the "think-aloud method"). The facilitator might ask the participants to narrate their actions and thoughts as they perform tasks. The goal of this approach is to understand participants' behaviors, goals, thoughts, and motivations.

In this usability-test session, the participant sits on the left, and the facilitator sits on the right. The participant uses a special testing laptop, which is running screen-recording software. The laptop has a webcam to capture the participant's facial expressions and is connected to an external monitor for the facilitator. The facilitator listens to his feedback, administers tasks, and takes notes. The photo captures the moment after the participant's task, when the facilitator is asking him followup questions.

Types of Usability Testing

Qualitative vs. Quantitative

Usability testing can be either qualitative or quantitative.

> **Qualitative usability testing** focuses on collecting insights, findings, and anecdotes about how people use the product or service. Qualitative usability testing is best for discovering problems in the user experience. This form of

usability testing is more common than quantitative usability testing.

Quantitative usability testing focuses on collecting metrics that describe the user experience. Two of the metrics most commonly collected in quantitative usability testing are task success and time on task. Quantitative usability testing is best for collecting benchmarks.

The number of participants needed for a usability test varies depending on the type of study. For a typical **qualitative usability study** of a single user group, we recommend **using five participants** to uncover the majority of the most common problems in the product.

Remote vs. In-Person Testing

Remote usability tests are popular because they often require less time and money than in-person studies. There are two types of remote usability testing: moderated and unmoderated.

Remote moderated usability tests work very similarly to in-person studies. The facilitator still interacts with the participant and asks her to perform tasks. However, the facilitator and participant are in different physical locations. Usually, moderated tests can be performed using screen-sharing software like Skype or GoToMeeting.

Remote unmoderated remote usability tests do not have the same facilitator–participant interaction as an in-person or moderated tests. The researcher uses a dedicated online

remote-testing tool to set up written tasks for the participant. Then, the participant completes those tasks alone on her own time. The testing tool delivers the task instructions and any followup questions. After the participant completes her test, the researcher receives a recording of the session, along with metrics like task success.

Remote Unmoderated: Flow of Information

TESTING PLATFORM

Researcher — *Writes* → Tasks ← *Performs* — Participant

Researcher — *Watches* → Video Recording ← *Records* — Participant

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In remote unmoderated usability testing, the flow of information changes because the facilitator does not interact with the participant in the same way as an in a moderated test. The testing platform takes on the role of the facilitator, administering tasks to the participant. The researcher designs the study and upload task instructions on the platform, and then reviews the data after it's collected, usually by observing video recordings of the tasks.

Cost of Usability Testing

Simple, "discount" usability studies can be inexpensive, though you usually must pay a few hundred dollars as incentives to participants.